

ø20, ø25, ø35, ø50

## Good for film packaging applications

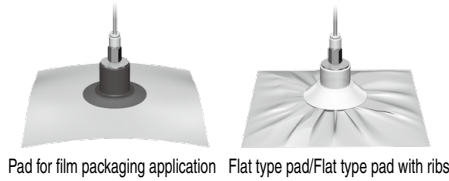
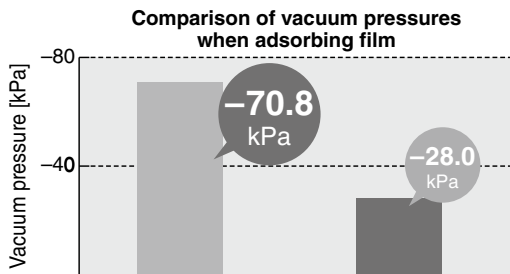
■ This product is made of materials compliant with FDA (USA Food and Drug Administration) regulations as well as Japan Food Sanitation Act standards.

■ **Blue colored pad**

Easy to distinguish the vacuum pad by color during contamination inspection

■ **Reduced leakage**

Sealing skirt design, better sealing performance even for thin films



■ **Reduction of wrinkles made on thin workpieces (film, vinyl, etc.) during adsorption**

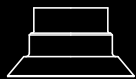
Wrinkle prevention with the stopper in the center of the vacuum pad



### Variations

Form	Pad diameter				Vacuum inlet/Mounting	Buffer stroke	Page
	ø20	ø25	ø35	ø50			
Pad Unit	●	●	●	●	—	—	267
With Adapter	●	●	●	●	M5 x 0.8, M12 x 1.75 G1/8, G1/4, G3/8	—	268
	●	●	●	●	M5 x 0.8 M8 x 1.25	—	
With Buffer	●	●	●	●	Vacuum inlet: M5 x 0.8, Rc1/8 Mounting: M10 x 1, M14 x 1	10 mm/20 mm	271

Model Selection  
 For Special Applications  
 Mark-free  
 For Film Adsorption  
 Multistage  
 Flat  
 Nozzle  
 Sponge  
 For Disk Adsorption  
 For Panel Holding  
 Ball Spline Buffer  
 Construction  
 Mounting Bracket Assembly  
 Precautions



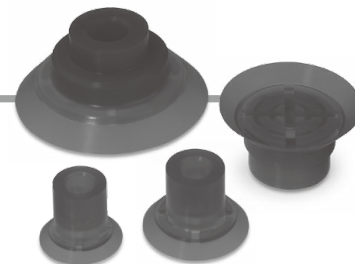
# Vacuum Pad

Symbol/Form

Pad diameter  $\varnothing 20, \varnothing 25, \varnothing 35, \varnothing 50$

## How to Order

Pad unit **ZP3P-20PTSF**



### Pad diameter

Symbol	Pad diameter
<b>20</b>	$\varnothing 20$
<b>25</b>	$\varnothing 25$
<b>35</b>	$\varnothing 35$
<b>50</b>	$\varnothing 50$

### Mounting Bracket Part Nos.

Adapter Assembly	p. 275
Buffer Assembly	p. 275

### Pad material

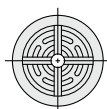
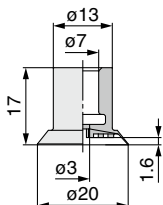
Symbol	Material
<b>SF</b>	Silicone rubber*1, *2

\*1 Compliant with the FDA (USA Food and Drug Administration) regulation 21CFR§177.2600 for "Rubber articles intended for repeated use"

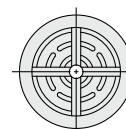
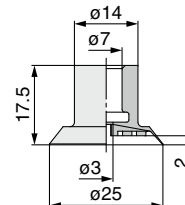
\*2 Compliant with the standards for "Rubber apparatus (excluding baby drinking apparatus) and containers/packaging" (D3) (Partial revision: Ministry of Health, Labour, and Welfare Notification No. 595, 2012) in Section 3 "Apparatus and Containers/Packaging" of the Japan Food Sanitation Act, Article 18 "Specifications and Standards for Food and Food Additives, etc." (Ministry of Health and Welfare Notification No. 370, 1959).

## Dimensions: Pad Unit

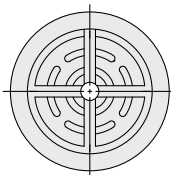
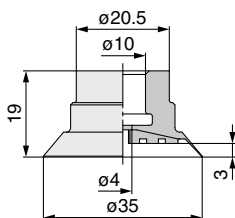
**ZP3P-20PTSF [Weight: 1.8 g]**



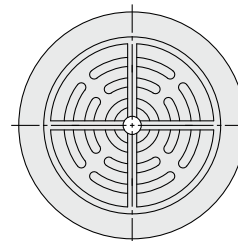
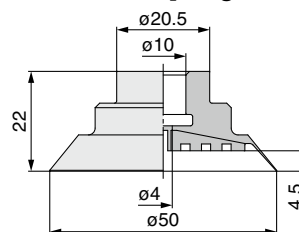
**ZP3P-25PTSF [Weight: 2.2 g]**



**ZP3P-35PTSF [Weight: 4.7 g]**



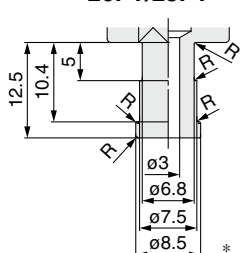
**ZP3P-50PTSF [Weight: 12.4 g]**



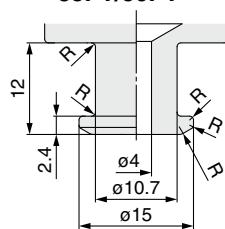
## Pad Mounting Dimensions

If an adapter will be made by the customer, design the adapter with the dimensions shown below.

### Applicable pad 20PT/25PT



### Applicable pad 35PT/50PT

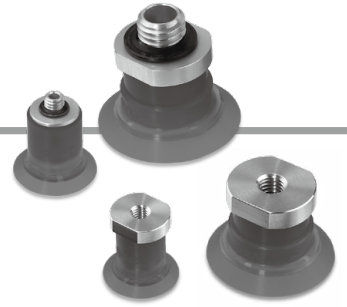


\* The R part has to be smooth with no corners.

## How to Order

Vertical vacuum inlet  
With adapter

# ZP3P--T 20 PT SF-A5



**Adapter material**

Symbol	Material
Nil	Aluminum
S	Stainless steel (Stainless steel 304)

**Pad diameter**

Symbol	Pad diameter
20	ø20
25	ø25
35	ø35
50	ø50

**Pad material**

Symbol	Material
SF	Silicone rubber*1, *2

- \*1 Compliant with the FDA (USA Food and Drug Administration) regulation 21CFR§177.2600 for "Rubber articles intended for repeated use"
- \*2 Compliant with the standards for "Rubber apparatus (excluding baby drinking apparatus) and containers/packaging" (D3) (Partial revision: Ministry of Health, Labour, and Welfare Notification No. 595, 2012) in Section 3 "Apparatus and Containers/Packaging" of the Japan Food Sanitation Act, Article 18 "Specifications and Standards for Food and Food Additives, etc." (Ministry of Health and Welfare Notification No. 370, 1959).

**Mounting thread size**

Type	Symbol	Size	ø20	ø25	ø35	ø50
Male thread	A5	M5 x 0.8	●	●	—	—
	A12	M12 x 1.75	—	—	●	●
	AG1	G1/8	●	●	—	—
	AG2	G1/4	—	—	●	●
Female thread	B5	M5 x 0.8	●	●	—	—
	B8	M8 x 1.25	—	—	●	●

\* The pad is shipped together but does not come assembled.

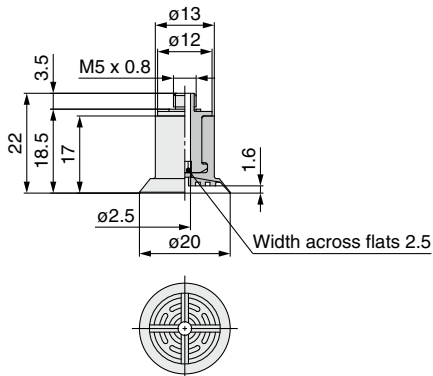
## Mounting

When mounting the male thread adapter, be sure to tighten using the recommended tightening torque in the chart on the right. Tightening outside of the recommended tightening torque range may result in sealing failure or loosening of the thread.

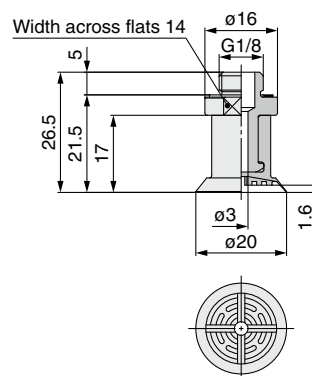
Product part number	Connection thread size	Proper tightening torque [N·m]
ZP3P□-T□PTSF-A5	M5 x 0.8	1.2 to 1.6
ZP3P□-T□PTSF-A12	M12 x 1.75	3 to 5
ZP3P□-T□PTSF-AG1	G1/8	3 to 5
ZP3P□-T□PTSF-AG2	G1/4	8 to 12
ZP3P□-T□PTSF-AG3	G3/8	15 to 20

### Dimensions: With Male Thread Adapter

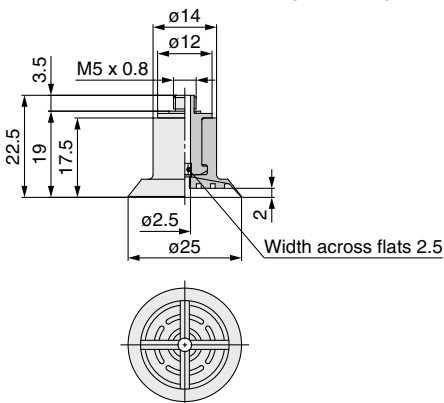
ZP3P-T20PTSF-A5 [Weight: 3.9 g]  
ZP3PS-T20PTSF-A5 [Weight: 7.6 g]



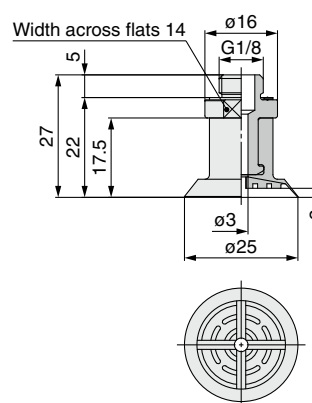
ZP3P-T20PTSF-AG1 [Weight: 5.9 g]  
ZP3PS-T20PTSF-AG1 [Weight: 13.1 g]



ZP3P-T25PTSF-A5 [Weight: 4.3 g]  
ZP3PS-T25PTSF-A5 [Weight: 8.0 g]



ZP3P-T25PTSF-AG1 [Weight: 6.3 g]  
ZP3PS-T25PTSF-AG1 [Weight: 13.5 g]



Model Selection

For Special Applications

Mark-free

For Film Adsorption

Multistage

Flat

Nozzle

Sponge

For Disk Adsorption

For Panel Holding

Ball Spline Buffer

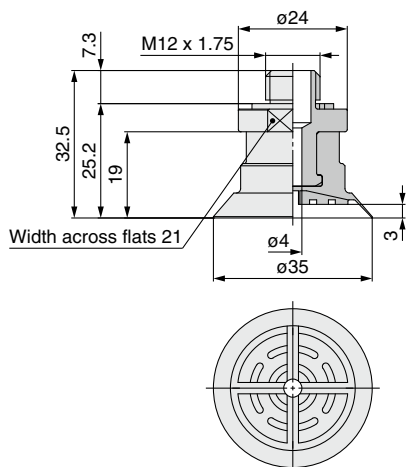
Construction

Mounting Bracket Assembly

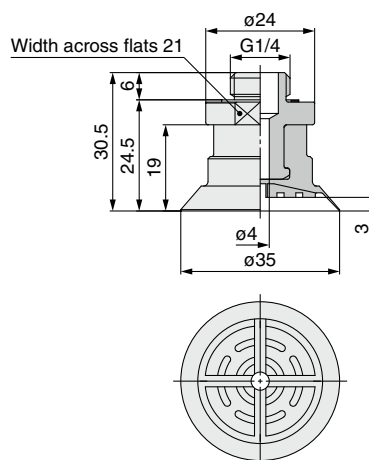
Precautions

## Dimensions: With Male Thread Adapter

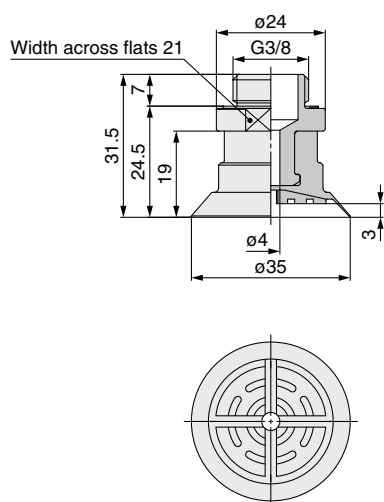
**ZP3P-T35PTSF-A12** [Weight: 20.7 g]  
**ZP3PS-T35PTSF-A12** [Weight: 48.3 g]



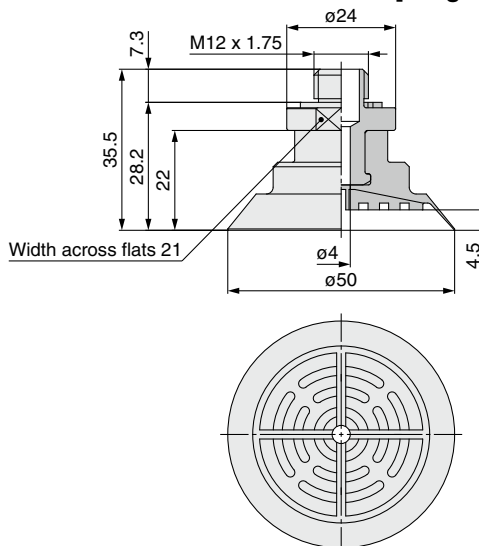
**ZP3P-T35PTSF-AG2** [Weight: 14.5 g]  
**ZP3PS-T35PTSF-AG2** [Weight: 32.1 g]



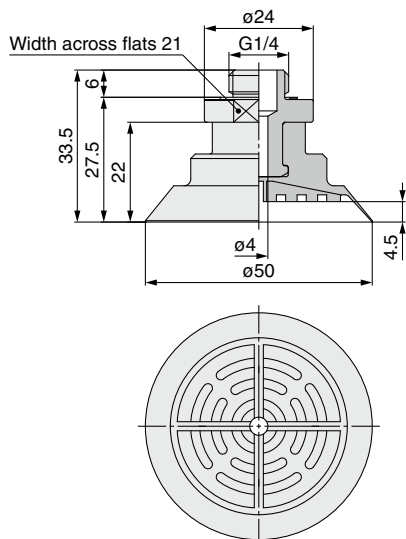
**ZP3P-T35PTSF-AG3** [Weight: 21.1 g]  
**ZP3PS-T35PTSF-AG3** [Weight: 48.8 g]



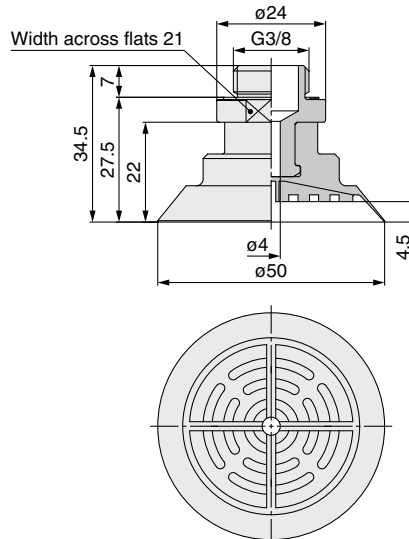
**ZP3P-T50PTSF-A12** [Weight: 28.4 g]  
**ZP3PS-T50PTSF-A12** [Weight: 56.0 g]



**ZP3P-T50PTSF-AG2** [Weight: 22.2 g]  
**ZP3PS-T50PTSF-AG2** [Weight: 39.8 g]

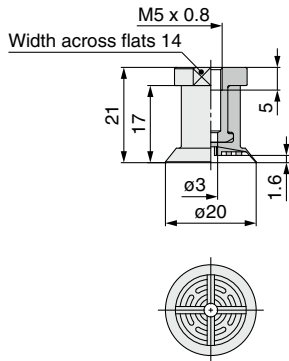


**ZP3P-T50PTSF-AG3** [Weight: 28.8 g]  
**ZP3PS-T50PTSF-AG3** [Weight: 56.5 g]

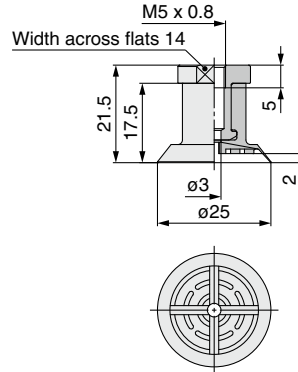


**Dimensions: With Female Thread Adapter**

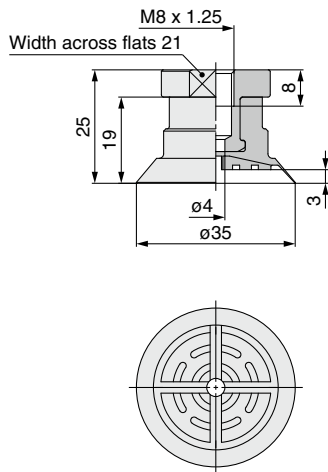
**ZP3P-T20PTSF-B5** [Weight: 4.9 g]  
**ZP3PS-T20PTSF-B5** [Weight: 10.5 g]



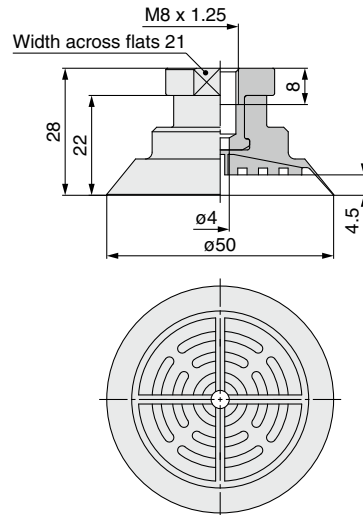
**ZP3P-T25PTSF-B5** [Weight: 5.3 g]  
**ZP3PS-T25PTSF-B5** [Weight: 10.9 g]



**ZP3P-T35PTSF-B8** [Weight: 13.2 g]  
**ZP3PS-T35PTSF-B8** [Weight: 28.7 g]



**ZP3P-T50PTSF-B8** [Weight: 20.9 g]  
**ZP3PS-T50PTSF-B8** [Weight: 36.4 g]



Model Selection

For Special Applications

Mark-free

For Film Adsorption

Multistage

Flat

Nozzle

Sponge

For Disk Adsorption

For Panel Holding

Ball Spline Buffer

Construction

Mounting Bracket Assembly

Precautions

## How to Order

Vertical vacuum inlet  
With buffer

## ZP3P-T 20 PT SF J 10-B5

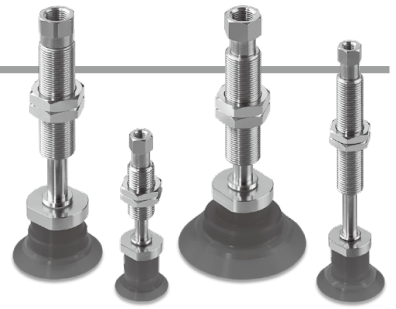
● Pad diameter

Symbol	Pad diameter
20	ø20
25	ø25
35	ø35
50	ø50

● Pad material

Symbol	Material
SF	Silicone rubber*1, *2

- \*1 Compliant with the FDA (USA Food and Drug Administration) regulation 21CFR§177.2600 for "Rubber articles intended for repeated use"  
\*2 Compliant with the standards for "Rubber apparatus (excluding baby drinking apparatus) and containers/packaging" (D3) (Partial revision: Ministry of Health, Labour, and Welfare Notification No. 595, 2012) in Section 3 "Apparatus and Containers/Packaging" of the Japan Food Sanitation Act, Article 18 "Specifications and Standards for Food and Food Additives, etc." (Ministry of Health and Welfare Notification No. 370, 1959).



● Vacuum inlet

Type	Symbol	Size	ø20, ø25	ø35, ø50
Female thread	B5	M5 x 0.8	●	—
	B01	Rc1/8	—	●

● Buffer specification

Symbol	Stroke	ø20, ø25	ø35, ø50
J	Rotating	●	●
K	Non-rotating	●	●

### Specifications

Pad diameter	Buffer specification	Stroke [mm]	Tightening torque [N·m]	Connection thread	Spring reactive force [N]	
					At 0 stroke	At full stroke
ø20, ø25	J/K	10, 20	2.5 to 3.5	M10 x 1	1.0	3.0
ø35, ø50	J/K	10, 20	6.5 to 7.5	M14 x 1	2.0	5.0

\* The pad and mounting nut are shipped together but do not come assembled.

## ⚠ Specific Product Precautions

Be sure to read this before handling the products. Refer to page 375 for safety instructions. For vacuum equipment and vacuum pad precautions, refer to pages 376 to 379.

### Operating Precautions

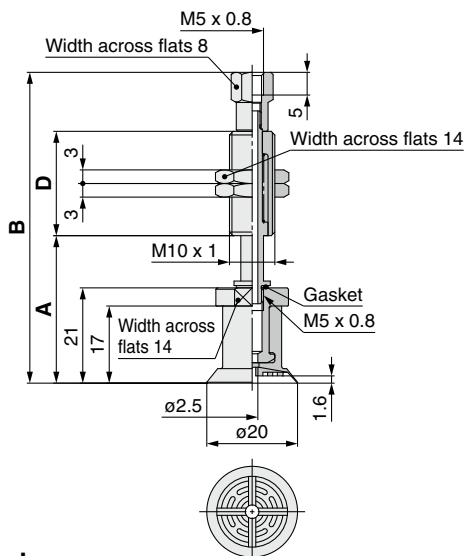
#### ⚠ Caution

##### 1. When selecting a buffer

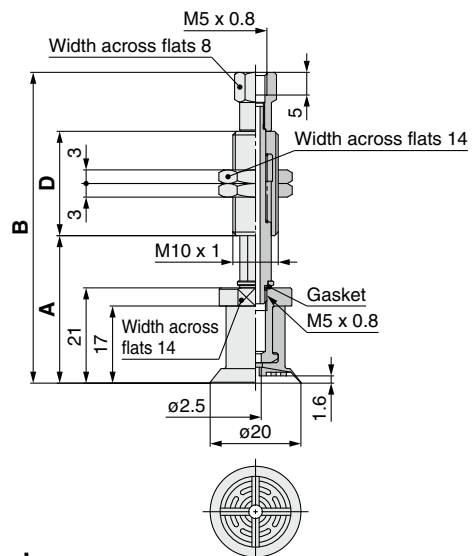
Buffers come with general industrial grease applied to them and are therefore not compliant with FDA regulations. Metal wear particles will be generated due to the sliding motion of the buffer. Please take this into consideration when deciding whether this pad is suitable for your application.

### Dimensions: With Buffer

ZP3P-T20PTSFJ■-B5



ZP3P-T20PTSFK■-B5



#### Dimensions

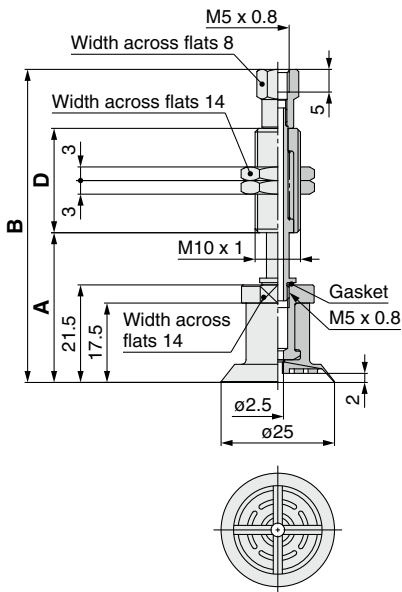
Part no.	A	B	D	Weight [g]
ZP3P-T20PTSFJ10-B5	32.5	68.5	23	26.7
ZP3P-T20PTSFJ20-B5	42.5	106.5	51	40.8

#### Dimensions

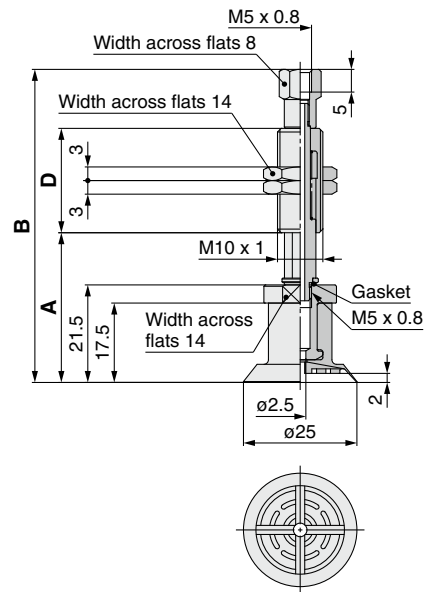
Part no.	A	B	D	Weight [g]
ZP3P-T20PTSFK10-B5	32.5	68.5	23	28.5
ZP3P-T20PTSFK20-B5	42.5	106.5	51	41.8

**Dimensions: With Buffer**

**ZP3P-T25PTSFJ■-B5**



**ZP3P-T25PTSFK■-B5**



**Dimensions**

Part no.	A	B	D	Weight [g]
ZP3P-T25PTSFJ10-B5	33	69	23	27.1
ZP3P-T25PTSFJ20-B5	43	107	51	41.2

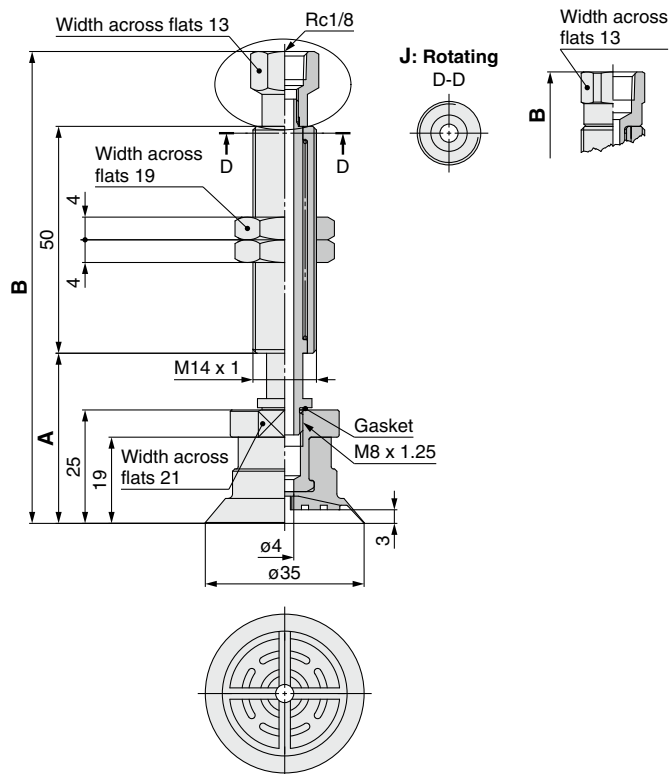
**Dimensions**

Part no.	A	B	D	Weight [g]
ZP3P-T25PTSFK10-B5	33	69	23	28.5
ZP3P-T25PTSFK20-B5	43	107	51	42.2

**ZP3P-T35PTSFJ■-B01**

**ZP3P-T35PTSFJ10-B01**

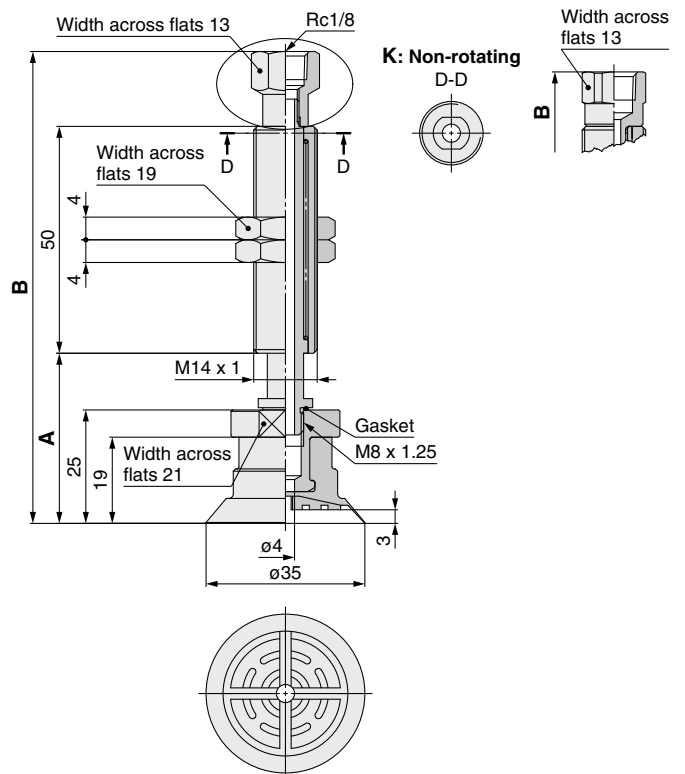
**ZP3P-T35PTSFJ20-B01**



**ZP3P-T35PTSFK■-B01**

**ZP3P-T35PTSFK10-B01**

**ZP3P-T35PTSFK20-B01**



**Dimensions**

Part no.	A	B	Weight [g]
ZP3P-T35PTSFJ10-B01	37.5	104	93.6
ZP3P-T35PTSFJ20-B01	47.5	109.5	94.6

**Dimensions**

Part no.	A	B	Weight [g]
ZP3P-T35PTSFK10-B01	37.5	104	93.0
ZP3P-T35PTSFK20-B01	47.5	109.5	94.1

Model Selection

For Special Applications

Mark-free

For Film Adsorption

Multistage

Flat

Nozzle

Sponge

For Disk Adsorption

For Panel Holding

Ball Spine Buffer

Construction

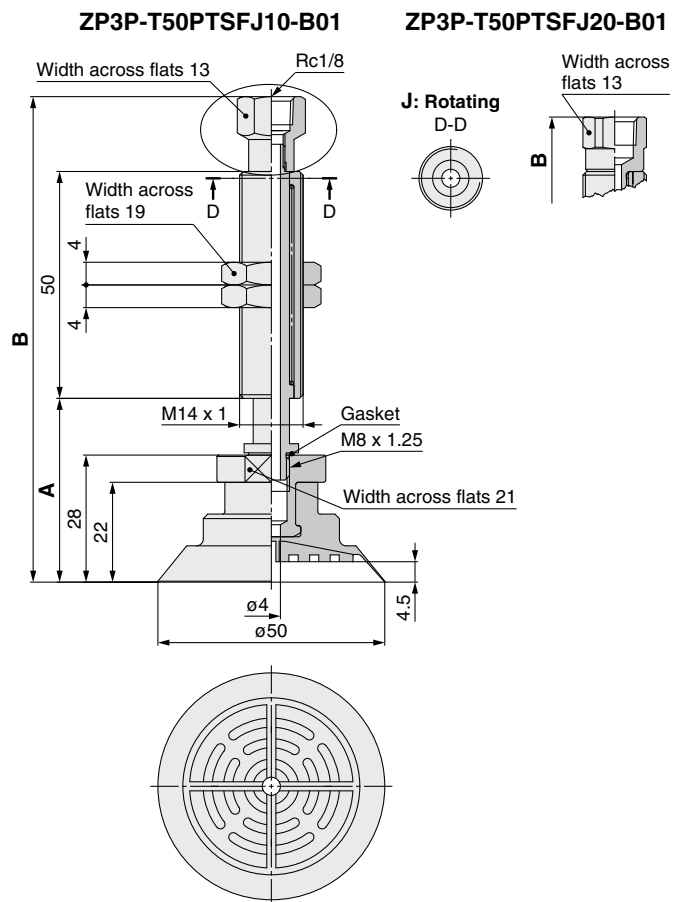
Mounting Bracket Assembly

Precautions



## Dimensions: With Buffer

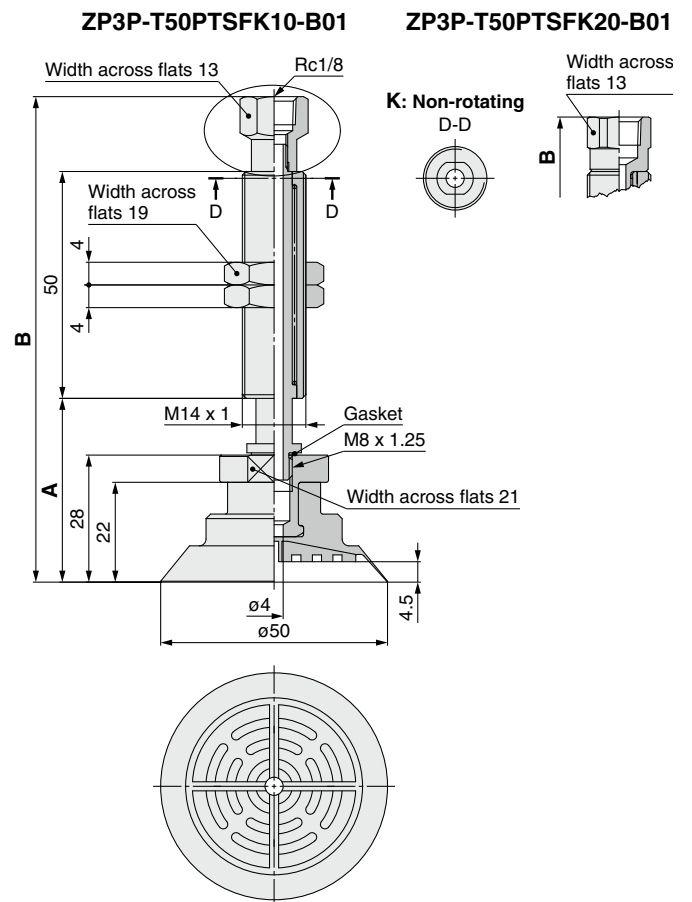
### ZP3P-T50PTSFJ■-B01



### Dimensions

Part no.	A	B	Weight [g]
<b>ZP3P-T50PTSFJ10-B01</b>	40.5	107	101.3
<b>ZP3P-T50PTSFJ20-B01</b>	50.5	112.5	102.3

### ZP3P-T50PTSFK■-B01



### Dimensions

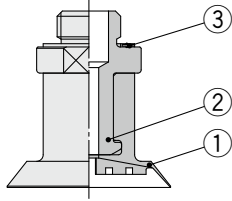
Part no.	A	B	Weight [g]
<b>ZP3P-T50PTSFK10-B01</b>	40.5	107	100.7
<b>ZP3P-T50PTSFK20-B01</b>	50.5	112.5	101.8



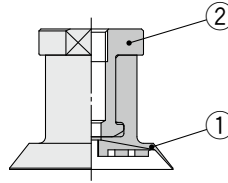
# Vacuum Pad *ZP3P-PT* Series Construction

## Pad with Adapter

### Male thread



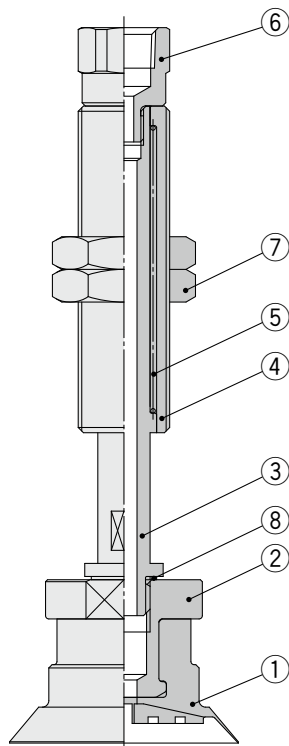
### Female thread



### Component Parts

No.	Description	Material (Surface treatment)	Note
1	Vacuum pad	Silicone rubber	
2	Adapter	Aluminum alloy (Clear anodized)	ZP3P-T□
		Stainless steel	ZP3PS-T□
3	Gasket	Stainless steel/NBR	ZP3P-□- (A5/AG1/AG2/AG3) ZP3PS-□- (AG1/AG2/AG3)
		Stainless steel/FKM	ZP3PS-□-A5
	Seal washer	Structural steel/NBR	ZP3P-□-A12
		Stainless steel/FKM	ZP3PS-□-A12

## Pad with Buffer



### Component Parts

No.	Description	Material (Surface treatment)
1	Vacuum pad	Silicone rubber
2	Adapter	Aluminum alloy (Clear anodized)
3	Piston rod	Stainless steel
4	Buffer body	Brass (Electroless nickel plating)
5	Return spring	Stainless steel
6	Buffer adapter	Brass (Electroless nickel plating)
7	Nut	Steel (Zinc chromated)
8	Gasket	Stainless steel/NBR

Model Selection

For Special Applications

Mark-free

For Film Adsorption

Multistage

Flat

Nozzle

Sponge

For Disk Adsorption

For Panel Holding

Ball Spine Buffer

Construction

Mounting Bracket Assembly

Precautions

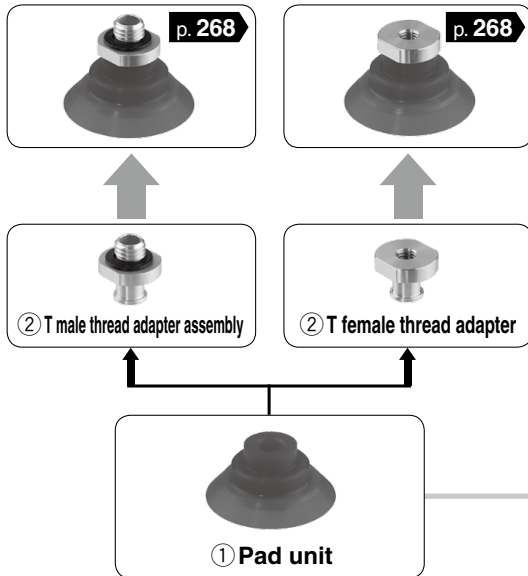
# Vacuum Pad ZP3P-PT Series

## Parts Structure

### With T Type Adapter

ZP3P□-T (20 to 50) PTSF-(A5/AG1/A12/AG2/AG3)

ZP3P□-T (20 to 50) PTSF-(B5/B8)



#### ② T male thread adapter assembly (With gasket)

Part no. \ Pad diameter	20	25	35	50
ZP3P□A-T1-A5	●	●	—	—
ZP3P□A-T1-AG1	●	●	—	—
ZP3P□A-T2-A12	—	—	●	●
ZP3P□A-T2-AG2	—	—	●	●
ZP3P□A-T2-AG3	—	—	●	●

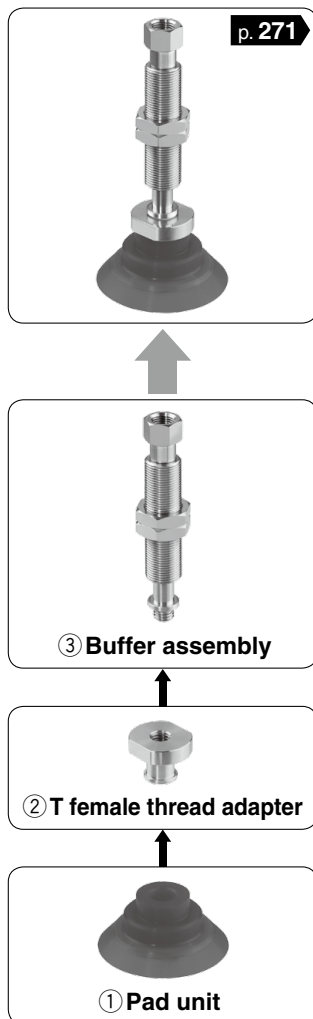
#### ② T female thread adapter

Part no. \ Pad diameter	20	25	35	50
ZP3P□A-T1-B5	●	●	—	—
ZP3P□A-T2-B8	—	—	●	●

#### ① Pad unit

Part no.
ZP3P-20PTSF
ZP3P-25PTSF
ZP3P-35PTSF
ZP3P-50PTSF

### With Buffer



#### ③ Buffer assembly

Part no. \ Pad diameter	20	25	35	50
ZPB2(J/K)10-B5	●	●	—	—
ZPB2(J/K)20-B5	●	●	—	—
ZPB3(J/K)10-B01	—	—	●	●
ZPB3(J/K)20-B01	—	—	●	●

#### ② T female thread adapter

Part no. \ Pad diameter	20	25	35	50
ZP3PA-T1-B5	●	●	—	—
ZP3PA-T2-B8	—	—	●	●

#### ① Pad unit

Part no.
ZP3P-20PTSF
ZP3P-25PTSF
ZP3P-35PTSF
ZP3P-50PTSF